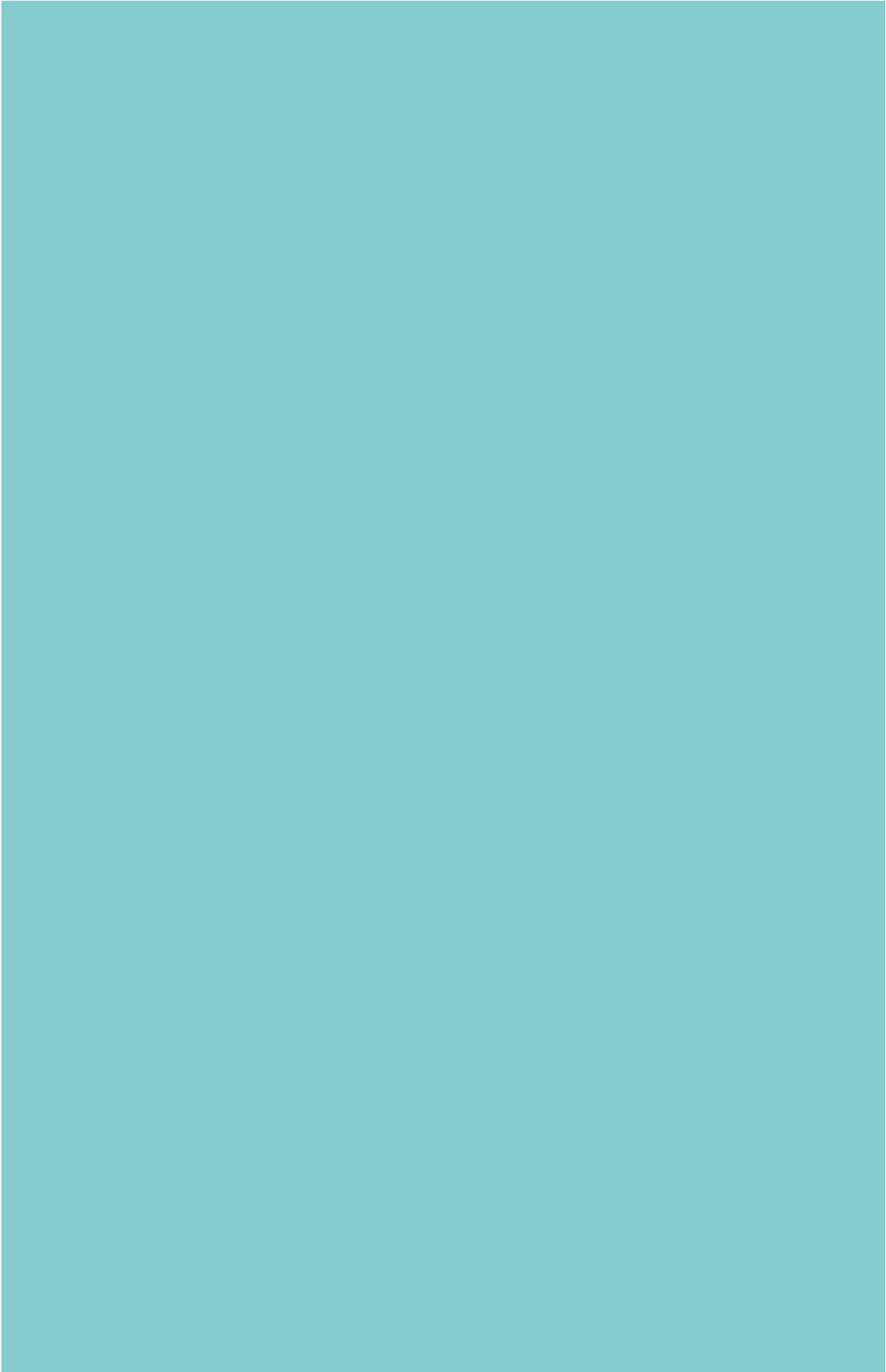


Pain Control

A GUIDE FOR PEOPLE WITH CANCER
AND THEIR FAMILIES



NATIONAL INSTITUTES OF HEALTH
National Cancer Institute



Pain Control

A GUIDE FOR PEOPLE WITH CANCER
AND THEIR FAMILIES



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Institutes of Health

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Introduction



This booklet will help you learn about pain control for people with cancer. You will find out how to work with your doctors, nurses, and pharmacists to find the best method to control your pain; about different types of pain medications and nondrug methods of controlling pain; how to take your medicines safely; and how to talk with your doctors and nurses about your pain and how well the treatment is working for you.

Having cancer does not always mean having pain. For those with pain, there are many different kinds of medicines, ways to receive the medicine, and nonmedicine methods that can relieve the pain you may have. You should not accept pain as a normal part of having cancer. When you are free of pain, you can sleep and eat better, enjoy the company of family and friends, and continue with your work and hobbies.

Because this booklet contains so much information, you may find it useful to refer to different sections as you need them. Also, at the end of the booklet, you will find an appendix, which includes:

- “Patient Notes” — blank spaces to write in the names and telephone numbers for your doctor, nurse, and pharmacist and space to take notes and write down the answers to the questions you ask your health professionals. You may want to take the booklet with you when you go for your treatments or to an appointment.
- “Pain Control Record” — a chart to keep track of your pain and how well the pain medicine and other pain methods are working. You may want to share this record with your doctor, nurse, or pharmacist.
- “Medicines Taking Now” and “Pain Medicines Taken in the Past” — charts to record information such as the name of the medicine, the dose, and the purpose of the medicine you are taking now and of the medicines you have taken. You may want to discuss these charts with your doctor, nurse, and pharmacist. Together you will create a plan for treating your pain.
- “Glossary” — an explanation of some terms you might hear in doctors’ offices or hospitals. The words are in bold in the text.

Important Facts About Cancer Pain Treatment

Only you know how much pain you have. Telling your doctor and nurse when you have pain is important. Not only is pain easier to treat when you first have it, but pain can be an early warning sign of the side effects of the cancer or the cancer treatment. Together — you, your nurse, and doctor — can talk about how to treat your pain. **You have a right to pain relief, and you should insist on it.**

Here are some facts about cancer pain that may help answer some of your questions.

Cancer pain can almost always be relieved.

There are many different medicines and methods available to control cancer pain. You should expect your doctor to seek all the information and resources necessary to make you as comfortable as possible. However, no one doctor can know everything about all medical problems. If you are in pain and your doctor suggests

no other options, ask to see a pain specialist or have your doctor consult with a pain specialist. Pain specialists may be **oncologists, anesthesiologists, neurologists, neurosurgeons**, other doctors, nurses, or pharmacists. A pain control team may also include psychologists and social workers.

If you have trouble locating a pain program or specialist, contact a cancer center, a hospice, or the oncology department at your local hospital or medical center. The National Cancer Institute's (NCI) Cancer Information Service (CIS) and other organizations can give you a list of pain management facilities. The American Cancer Society (ACS) and other organizations may also be able to provide names of pain specialists, pain clinics, or programs in your area. See "Resources" at the back of the booklet for information on these organizations.

Controlling your cancer pain is part of the overall treatment for cancer.

Your doctor wants and needs to hear about what works and what doesn't work for your pain. Knowing about the pain will help your doctor better understand how the cancer and the treatment are affecting your body. Discussions about pain will not distract your doctor from treating the cancer.

Preventing pain from starting or getting worse is the best way to control it.

Pain is best relieved when treated early. You may hear some people refer to this as "staying on top" of the pain. Do not try to hold off as long as possible between doses. Pain may get worse if you wait, and it may take longer, or require larger doses, for your medicine to give you relief.

Telling the doctor or nurse about pain is not a sign of weakness. You have a right to ask for pain relief.

Not everyone feels pain in the same way. There is no need to be "stoic" or "brave" if you have more pain than others with the same kind of cancer. In fact, as soon as you have any pain you

should speak up. Remember, it is easier to control pain when it just starts rather than waiting until after it becomes severe.

People who take cancer pain medicines, as prescribed by the doctor, rarely become addicted to them.

Addiction is a common fear of people taking pain medicine. Such fear may prevent people from taking the medicine. Or it may cause family members to encourage you to “hold off” as long as possible between doses. Addiction is defined by many medical societies as uncontrollable drug craving, seeking, and use. When **opioids** (also known as **narcotics**) — the strongest pain relievers available — are taken for pain, they rarely cause addiction as defined here. When you are ready to stop taking opioids, the doctor gradually lowers the amount of medicine you are taking. By the time you stop using it completely, the body has had time to adjust. Talk to your doctor, nurse, or pharmacist about how to use pain medicines safely and about any concerns you have about addiction.

Most people do not get “high” or lose control when they take cancer pain medicines as prescribed by the doctor.

Some pain medicines can cause you to feel sleepy when you first take them. This feeling usually goes away within a few days. Sometimes you become drowsy because, with the relief of the pain, you are now able to catch up on the much needed sleep you missed when you were in pain. On occasion, people get dizzy or feel confused when they take pain medicines. Tell your doctor or nurse if this happens to you. Changing your dose or type of medicine can usually solve the problem.

Side effects from medicines can be managed or often prevented.

Some medicines can cause constipation, nausea and vomiting, or drowsiness. Your doctor or nurse can help you manage these side effects. These problems usually go away after a few days of taking the medicine. Many **side effects** can be managed by changing the medicine or the dose or times when the medicine is taken.

Your body does not become immune to pain medicine. Stronger medicines should not be saved for “later.”

Pain should be treated early. It is important to take whatever medicine is needed at the time. You do not need to save the stronger medicines for later. If your body will get used to the medicine you are taking, your medicine may not relieve the pain as well as it once did. This is called **tolerance**. Tolerance is not usually a problem with cancer pain treatment because the amount of medicine can be changed or other medicines can be added.

When pain is not treated properly, you may be:

- Tired
- Depressed
- Angry
- Worried
- Lonely
- Stressed

When cancer pain is managed properly, you can:

- Enjoy being active
- Sleep better
- Enjoy family and friends
- Improve your appetite
- Enjoy sexual intimacy
- Prevent depression

About Cancer Pain



What Are the Different Types of Pain?

Pain may be acute or chronic. **Acute pain** is severe and lasts a relatively short time. It is usually a signal that body tissue is being injured in some way, and the pain generally disappears when the injury heals. **Chronic or persistent pain** may range from mild to severe, and it is present to some degree for long periods of time. Some people with chronic pain that is controlled by medicine can have **breakthrough pain** — this occurs when moderate to severe pain “breaks through” or is felt for a short time. It may occur several times a day, even when the proper dose of medicine is given for chronic and persistent pain.

What Causes Pain in People With Cancer?

The pain you feel may be from the cancer itself. Whether you have pain and the amount of pain you have may depend on the type of cancer, the **stage** (extent) of the disease, and your **pain threshold** (tolerance for pain). Most of the pain comes when a

tumor presses on bones, nerves, or body organs. It can also be caused by the treatment or procedures for diagnosing cancer. Or you may have pain that has nothing to do with your illness or treatment. Like anyone, you can get headaches, muscle strains, and other aches and pains.

Pain From Procedures

Some methods used to diagnose cancer and to see how well the treatment is working are painful. If you and your doctors agree that a diagnostic procedure is necessary, concern about pain should not prevent you from having the procedure. Usually any pain you have during and after the procedure can be relieved. The needs of the person and the type of procedure to be done determine the kinds of medicine that can be given for the pain. You may be told that the pain from the procedure can't be avoided or that it won't last long. Even so, you should ask for pain medicine if you feel the need.

Phantom Pain

If you have had an arm or leg removed by surgery, you may still feel pain or other unusual or unpleasant sensations as if they were coming from the absent (phantom) limb. Doctors are not sure why this occurs, but **phantom limb pain** is real; it is not "in your mind." This pain can also occur if you have had a breast removed — you may have a sensation of pain at the site of the missing breast.

No single pain relief method controls phantom pain in all patients all the time. Many methods have been used to treat this type of pain, including pain medicine, **physical therapy**, **antidepressant** medicines, and **transcutaneous electric nerve stimulation (TENS)**. If you are having phantom pain, ask your doctor, nurse, or pharmacist about what can be done.

Spinal Cord Compression

When a tumor spreads to the spine, it can press on the spinal cord and cause spinal cord compression. The first sign of the compression is usually back and/or neck pain. It is often made worse by coughing, sneezing, or other movements. If you have this

pain, it is important to notify your doctor right away. Your doctor can treat the cause of the pain and also give you medicine to relieve the pain. If you receive treatments for the compression soon after the pain occurs, complications such as bladder or bowel problems can usually be avoided. Treatments usually involve **radiation therapy** to shrink the tumor or surgery to remove the tumor followed by radiation.

How Is Cancer Pain Treated?

Cancer pain is usually treated with medicine (also called **analgesics**) and with nondrug treatments such as **relaxation techniques, biofeedback, imagery**, and others. Ask your doctor, nurse, or pharmacist for advice before you take any medicine for pain. Medicines are safe when they are used properly. You can buy some effective pain relievers without a **prescription** or doctor's order. These medicines are also called **nonprescription** or over-the-counter **pain relievers**. For others, a prescription from your doctor is necessary.

For the small number of people for whom medicine and non-drug treatments do not work, other treatments are available: radiation therapy to shrink the tumor; surgery to remove part or all of the tumor; **nerve blocks** whereby pain medicine is injected into or around a nerve or into the spine to block the pain; and neurosurgery, where pain nerves are cut to relieve the pain.

Developing a Plan for Pain Control

The first step in developing a plan is talking with your doctor, nurse, and pharmacist about your pain. You need to be able to describe your pain to your health professionals as well as to your family or friends. You may want to have your family or friends help you talk to your health professionals about your pain control, especially if you are too tired or in too much pain to talk to them yourself.

Using a pain scale is helpful in describing how much pain you are feeling. An example of a pain scale can be found in the Appendix. Try to assign a number from 0 to 10 to your pain level. If you have no pain, use a 0. As the numbers get higher, they stand for pain that is getting worse. A 10 means the pain is as bad as it can be.

You may wish to use your own pain scale using numbers from 0 to 5 or even 0 to 100. Be sure to let others know what pain scale you are using and use the same scale each time, for example, “My pain is a 7 on a scale of 0 to 10.”

You can use a rating scale to describe:

- How bad your pain is at its worst.
- How bad your pain is most of the time.
- How bad your pain is at its least.
- How your pain changes with treatment.

Tell your doctor, nurse, pharmacist and family or friends:

- Where you feel pain.
- What it feels like — sharp, dull, throbbing, steady.
- How strong the pain feels.
- How long it lasts.
- What eases the pain, what makes the pain worse.
- What medicines you are taking for the pain and how much relief you get from them.

Your doctor, nurse, and pharmacist may also need to know:

- What medicines you are taking now and what pain medicines you have taken in the past, including what has worked and not worked. You may want to record this information on the charts, “Medicines Taking Now” and “Pain Medicines Taken in the Past,” found in the Appendix.
- Any known allergies to medicines.

Questions to ask your doctor or nurse about pain medicine:

- How much medicine should I take? How often?
- If my pain is not relieved, can I take more? If the dose should be increased, by how much?
- Should I call you before increasing the dose?
- What if I forget to take it or take it too late?
- Should I take my medicine with food?
- How much liquid should I drink with the medicine?
- How long does it take the medicine to start working (called “onset of action”)?
- Is it safe to drink alcoholic beverages, drive, or operate machinery after I have taken pain medicine?
- What other medicines can I take with the pain medicine?
- What side effects from the medicine are possible and how can I prevent them?

Keeping Track of Details About the Pain

You may find it helpful to keep a record or a diary to track the pain and what works best to ease it. You can share this record with those caring for you. This will help them figure out what method of pain control works best for you. You may wish to use copies of the “Pain Control Record” found in the Appendix to record this information. Your records can include:

- Words to describe the pain.
- Any activity that seems to be affected by the pain or that increases or decreases the pain.
- Any activity that you cannot do because of the pain.
- The name and the dose of the pain medicine you are taking.
- The times you take pain medicine or use another pain-relief method.
- The number from your rating scale that describes your pain at the time you use a pain-relief measure.
- Pain rating 1 to 2 hours after the pain-relief method.
- How long the pain medicine works.
- Pain rating throughout the day to record your general comfort.
- How pain interferes with your normal activities, such as sleeping, eating, sexual activity, or working.
- Any pain-relief methods other than medicine you use such as rest, relaxation techniques, **distraction**, **skin stimulation**, or imagery.
- Any side effects that occur.

What If I Need To Change My Pain Medicine?

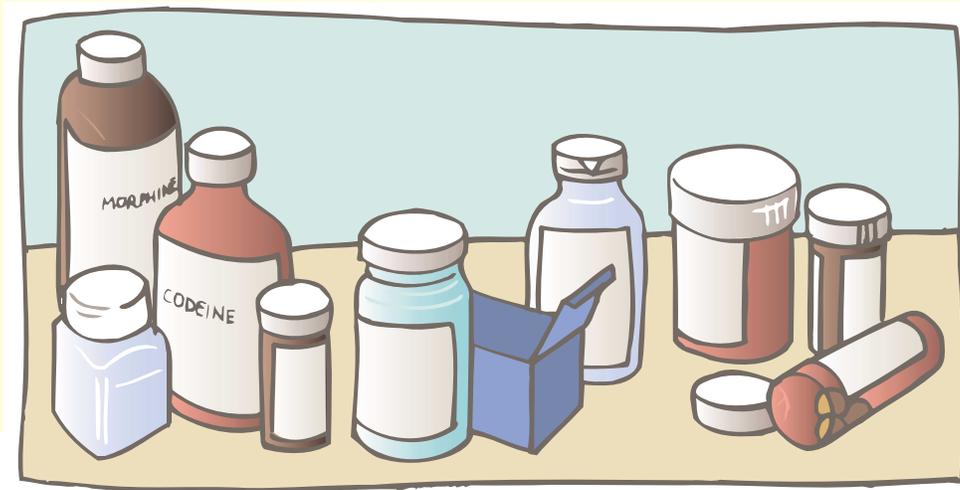
If one medicine or treatment does not work, there is almost always another one that can be tried. Also, if a schedule or way that you are taking medicine does not work for you, changes can be made. Talk to your doctor or nurse about finding the pain medicine or method that works best for you. You may need a different pain medicine, a combination of pain medicines or a change in the dose of your pain medicines if:

- Your pain is not relieved.
- Your pain medicine does not start working within the time your doctor said it would.
- Your pain medicine does not work for the length of time your doctor said it would.
- You have breakthrough pain.
- You have side effects.
- You have serious side effects such as trouble breathing, dizziness, and rashes. Call your doctor right away if these occur. Side effects such as sleepiness, nausea, and itching usually go away after your body adjusts to the medication. Let your doctor know if these bother you.
- The schedule or the way you are taking the medicine does not work for you.
- Pain interferes with your normal activities, such as eating, sleeping, working, and sexual activity.

To help make the most of your pain control plan:

- Take your pain medicine on a regular schedule (by the clock) to help prevent persistent or chronic pain.
- Do not skip doses of your scheduled medicine. Once you feel the pain, it is harder to control.
- If you experience breakthrough pain, use your short-acting medicine as your doctor suggests. Don't wait for the pain to get worse — if you do, it may be harder to control.
- Be sure only one doctor prescribes your pain medicine. If another doctor changes your medicine, the two doctors should discuss your treatment with each other.
- Never take someone else's medicine. Medicines that worked for you in the past or that helped a friend or relative may not be right for you.
- Pain medicines affect different people in different ways. A very small dose may work for you, while someone else may need to take a much larger dose to obtain pain relief.
- Remember, your pain control plan can be changed at any time.

Medicines Used To Relieve Pain



The type of medicine and the method by which the medicine is given depend on the type and cause of pain. For example, constant, persistent pain is best relieved by methods that deliver a steady dose of pain medicine over a long period of time, such as a patch that is filled with medicine and placed on the skin (**skin patch**) or slow-release oral tablets. Below is an overview of the types of medicines used to relieve pain. More detailed explanations can be found later in the booklet.

For Mild to Moderate Pain

Nonopioids: Acetaminophen and **nonsteroidal anti-inflammatory drugs (NSAIDs)**, such as aspirin and ibuprofen. You can buy many of these over-the-counter (without a prescription). For others, you need a prescription. Check with your doctor before using these medicines. NSAIDs can slow blood clotting, especially if you are on **chemotherapy**.

For Moderate to Severe Pain

Opioids (also known as narcotics): Morphine, fentanyl, hydromorphone, oxycodone, and codeine. You need a

prescription for these medicines. Nonopioids may be used along with opioids for moderate to severe pain.

For Breakthrough Pain

Rapid-Onset Opioids: Immediate-release oral morphine. You need a prescription for these medicines. A short-acting opioid, which relieves breakthrough pain quickly, needs to be used with a long-acting opioid for persistent pain.

For Tingling and Burning Pain

Antidepressants: Amitriptyline, nortriptyline, desipramine. You need a prescription for these medicines. Antidepressants are also prescribed to relieve some types of pain. Taking an antidepressant does not mean that you are depressed or have a mental illness.

Anticonvulsants (antiseizure medicines): Carbamazepine and phenytoin. You need a prescription for these medicines. Despite the name, anticonvulsants are used not only for convulsions, but also to control burning and tingling pain.

For Pain Caused by Swelling

Steroids: Prednisone, dexamethasone. A prescription is needed for these medicines. They are used to lessen swelling, which often causes pain.

How Is Pain Medicine Given?

Some people think that if their pain becomes severe, they will need to receive injections or “shots.” Actually, shots are rarely given to relieve cancer pain. There are many ways to get the medicine.

- Orally — medicine is given in a pill or capsule form.
- Skin patch — a bandage-like patch placed on the skin, which slowly but continuously releases the medicine through the skin for 2-3 days. One opioid medicine, fentanyl, is available as a skin patch. This form of medicine is less likely to cause nausea and vomiting.

- **Rectal suppositories** — medicine that dissolves in the rectum and is absorbed by the body.
- **Injections**
 - **Subcutaneous (SC) injection** — medicine is placed just under the skin using a small needle.
 - **Intravenous (IV) injection** — medicine goes directly into the vein through a needle.
 - **Intrathecal and epidural injections** — medicine is placed directly into the fluid around the spinal cord (intrathecal) or into the space around the spinal cord (epidural).
- **Pump**

Patient-controlled analgesia (PCA) — with this method, you can help control the amount of pain medicine you take. When you need pain relief, you can receive a preset dose of pain medicine by pressing a button on a computerized pump that is connected to a small tube in your body. The medicine is injected into the vein (intravenously), just under the skin (subcutaneously), or into the spinal area.

If your pain is not well controlled with one of the long-acting oral medicines, if you are having trouble taking pills, or if you are having irritating side effects, ask your doctor about trying one of the methods listed above.

What Are the Side Effects of Pain Medicine?

Many side effects from pain medicine can be prevented. Some mild side effects that do occur, such as nausea, itching, or drowsiness, will usually go away after a few days as your body adjusts to the medicine. Let your doctor or nurse know if you are having these side effects and ask for help in controlling them.

More serious side effects of pain medicine are rare. As with the more common ones, they usually happen in the first few hours of

treatment. They include trouble breathing, dizziness, and rashes. If you have any of these side effects, you should call your doctor right away.

You usually cannot take aspirin, ibuprofen, and other NSAIDs when you are on chemotherapy.

Which Medicines Will I Be Given?

In many cases, nonopioids are all you will need to relieve your pain, especially if you “stay on top of the pain” by taking them regularly. These medicines are stronger pain relievers than most people realize. For example, certain doses of opioids given by mouth are no more effective than two or three regular tablets of aspirin, acetaminophen, or ibuprofen.

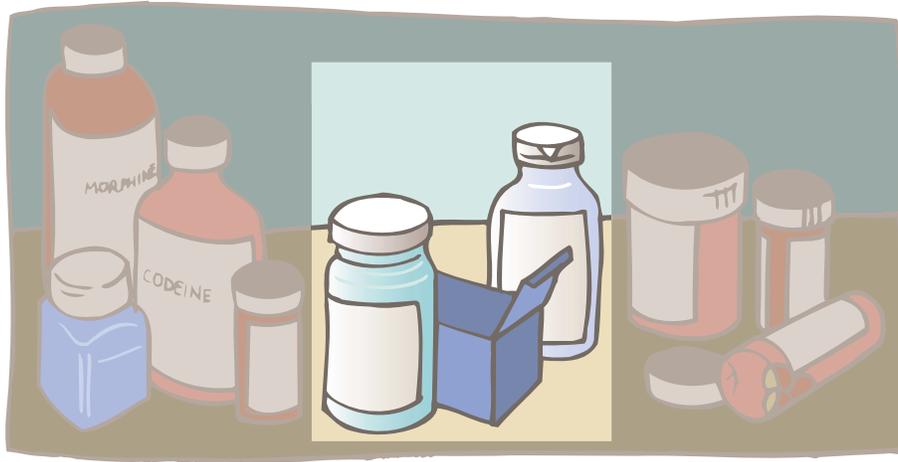
If you do not get pain relief from nonopioids, opioids will usually give you the relief you need. Most side effects from opioids can be prevented or controlled. You should discuss taking opioids along with nonopioids with your doctor, nurse, or pharmacist. The two types of medicine relieve pain in different ways. Aspirin, acetaminophen, or ibuprofen taken four times a day might help avoid or reduce the need for a stronger pain relievers.

Many people who take opioids can benefit from continuing to take regular doses of aspirin, acetaminophen, or ibuprofen.

Some pain medicines combine an opioid and a nonopioid, like aspirin or acetaminophen, in the same pill. Ask your doctor, nurse, or pharmacist how much aspirin or acetaminophen, if any, is in your prescription. They can help you figure out how much

of these medicines you can take safely. Other classes of medicines, such as antidepressants and anticonvulsants, are also used to relieve certain types of cancer pain. A chart on page 30 lists these other classes of medicines, how they work, and their side effects.

Nonopioids



Nonopioids control mild to moderate pain. Some can be bought without a prescription. For detailed information on nonopioids, review the chart on page 19.

Table 1. NONOPIOIDS — ACETAMINOPHEN AND NSAIDs

TYPE	ACTION	SIDE EFFECTS
Acetaminophen	Reduces pain and fever.	<p>Large doses can injure the liver or kidneys.</p> <p>Use by persons who have 3 or more alcoholic drinks per day may cause liver damage.</p> <p>Acetaminophen reduces fever, so ask your doctor about what to do if your body temperature is greater than normal (98.6°F or 37°C) while you are taking this medicine.</p>
NSAIDs (Nonsteroidal anti-inflammatory drugs)		
<p><i>Over the counter:</i></p> <p>Aspirin</p> <p>Ibuprofen</p> <p>Ketoprofen</p> <p>Naproxen sodium</p> <p><i>Prescription:</i></p> <p>Celecoxib</p> <p>Choline magnesium trisalicylate</p> <p>Diclofenac</p> <p>Etodolac</p> <p>Fenoprofen calcium</p> <p>Indomethacin</p> <p>Ketorolac</p> <p>Meclofenamic acid</p> <p>Meclofenamate sodium</p> <p>Nabumetone</p> <p>Naproxen</p> <p>Oxaprozin</p> <p>Piroxicam</p> <p>Rofecoxib</p> <p>Sulindac</p> <p>Tolmetin sodium</p>	Reduce pain, inflammation, and fever.	<p><i>NSAID medicines can have the following side effects:</i></p> <p>Can irritate the stomach.</p> <p>Can cause bleeding of the stomach lining, especially if combined with alcohol.</p> <p>Can cause kidney problems.</p> <p>Avoid these medications if you are on anti-cancer drugs that may cause bleeding.</p> <p>Aspirin and NSAIDs reduce fever, so ask your doctor about what to do if your body temperature is greater than normal (98.6°F or 37°C) while you are taking one of these medicines.</p>

Brand-Name Drugs Versus Generic Drugs

Drugs may have as many as three different names: brand, generic, and chemical. Drug companies give their products brand names. The U.S. Food and Drug Administration (FDA) approves the **generic**, shortened names by which drugs are usually known. Chemical names are long and tend to be hard to pronounce. Here's an example:

Brand name: Tylenol

Generic name: Acetaminophen

Chemical name: N-(4-hydroxyphenyl) acetamide

Many pain relievers are available under both generic and brand names. Your doctor, nurse, or pharmacist can tell you the generic name.

Generic products are generally less costly than brand-name drugs. Sometimes medicines can have the same generic name, but are produced by different companies. Because the companies may produce the medicines differently, they may differ in the way they are absorbed by the body. For this reason, your doctor may prefer that you take a brand-name drug. You might want to ask your doctor, nurse, or pharmacist if you can use a less expensive medication. Pharmacists are careful to obtain high-quality generic products, so it is sometimes possible to make substitutions.

In addition to the main substance (aspirin, acetaminophen, or ibuprofen), some brands contain substances called additives. Common additives include:

- Buffers (e.g., magnesium carbonate, aluminum hydroxide) to decrease stomach upset.
- Caffeine to act as a stimulant and lessen pain.
- Antihistamines (e.g., diphenhydramine, pyrilamine) to help you relax or sleep.

Medicines with additives can cause some unwanted effects. For example, antihistamines sometimes cause drowsiness. This may be fine at bedtime, but it could be a problem during the day or while you are driving. Also, additives tend to increase the cost of nonprescription pain relievers. They can also change the action of other medicines you may be taking.

Plain aspirin, acetaminophen, or ibuprofen probably work as well as the same medicines with additives. But if you find that a brand with certain additives is a better pain reliever, ask your doctor, nurse, or pharmacist if the additives are safe for you. Talk with them about any concerns you may have about the drugs contained in your nonprescription pain medicines.

NSAIDs

Before you take aspirin, acetaminophen, or other nonopioids in any form, ask your doctor or nurse if there is any reason for you not to take it and how long you can take it.

NSAIDs are similar to aspirin. Either alone or in combination with other medicines, NSAIDs are useful in controlling pain and inflammation.

Precautions When Taking NSAIDs

Some people have conditions that may be made worse by NSAIDs or by any product that contains NSAIDs. In general, NSAIDs should be avoided by people who:

- Are allergic to aspirin.
- Are on chemotherapy (anticancer drugs).
- Are on steroid medicines.
- Have stomach ulcers or a history of ulcers, gout, or bleeding disorders.

- Are taking prescription medicines for arthritis.
- Are taking oral medicine for diabetes or gout.
- Have kidney problems.
- Will have surgery within a week.
- Are taking blood-thinning medicine.

Be careful about mixing NSAIDs with alcohol — taking NSAIDs and drinking alcohol can cause stomach upset and sometimes bleeding in the lining of the stomach.

“Hidden Aspirin”

Some opioid medications also contain aspirin. If your doctor does not want you to take aspirin, be sure to read the labels carefully. If you are not sure if a medicine contains aspirin, ask your pharmacist.

Side Effects of NSAIDs

The most common side effect from NSAIDs is stomach upset or indigestion, especially in older patients. Taking NSAIDs with food or milk or immediately following a meal lessens the chance of this occurring. Ask your pharmacist to tell you which NSAIDs products are less likely to upset your stomach.

NSAIDs also prevent platelets — blood cells that help blood clot after an injury — from working correctly. When platelets don't function as they should, bleeding is more difficult to stop.

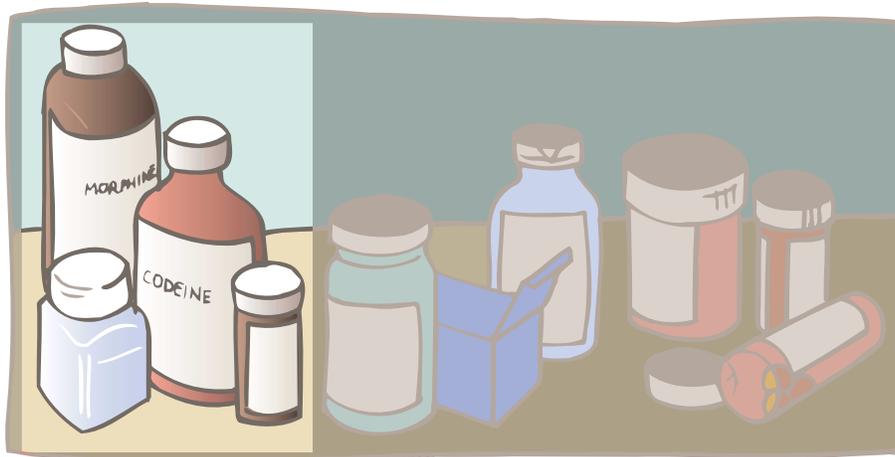
NSAIDs can also irritate the stomach and cause bleeding. If your stools become darker than normal or if you notice unusual bruising — both signs of bleeding — tell your doctor or nurse. Other side effects include kidney problems and stomach ulcers.

Acetaminophen

This medicine relieves pain in a way similar to NSAIDs, but it does not reduce inflammation as well as NSAIDs. People rarely have any side effects from the usual dose of acetaminophen. However, liver and kidney damage may result from using large doses of this medicine every day for a long time or drinking alcohol with the usual dose. Moderate amounts of alcohol can produce liver damage in people taking acetaminophen.

Your doctor may not want you to take acetaminophen regularly if you are receiving chemotherapy. It can cover up a fever. The doctor needs to know about any fever because it may be a sign of infection, which needs to be treated.

Opioids



These medicines are used alone or with nonopioids to treat moderate to severe pain. Opioids are similar to natural substances (endorphins) produced by the body to control pain. Some work

better than others in relieving severe pain. These medicines were once made from the opium poppy, but today many are synthetic, that is, they are chemicals made by drug companies. See the table below for examples of opioids.

Table 2. OPIOIDS

GENERIC NAME
Codeine
Hydromorphone
Levorphanol
Methadone
Morphine
Oxycodone
Meperidine
Oxymorphone
Fentanyl
Combination Opioid/NSAID preparations
Codeine (with aspirin or acetaminophen)
Oxycodone
Hydrocodone

What Is Drug Tolerance?

People who take opioids for pain sometimes find that over time they need to take larger doses. This may be due to an increase in the pain or the development of drug tolerance. Drug tolerance occurs when your body gets used to the medicine you are taking, and your medicine does not relieve the pain as well as it once did. Many people do not develop a tolerance to opioids. If tolerance does develop, usually small increases in the dose or a change in the kind of medicine will help relieve the pain.

Increasing the doses of opioids to relieve increasing pain or to overcome drug tolerance does NOT lead to addiction.

How To Get Proper Pain Relief With Opioids

When a medicine does not give you enough pain relief, your doctor may increase the dose or how often you take it. With careful medical observation, the doses of strong opioids can be raised safely to ease severe pain. Do not increase the dose of your pain medicine on your own. If these measures do not work, the doctor may prescribe a different or additional drug. Some opioids are stronger than others, and you may need a stronger one to control your pain.

If your pain relief is not lasting long enough, ask your doctor about extended-release medicines, which can control your pain for a longer period of time. Morphine and oxycodone are made in extended-release forms. Also, a skin patch that releases the opioid fentanyl can be used.

If your pain is controlled most of the time, but occasionally breaks through, your physician may prescribe a rapid-acting medicine, such as immediate-release morphine, to give you more pain relief when it is needed.

Precautions When Taking Opioids

Doctors carefully adjust the doses of pain medicines so there is little possibility of taking too much medicine. Therefore, it is important that two different doctors do not prescribe opioids for you unless they talk to one another about it.

If you drink alcohol or take tranquilizers, sleeping aids, antidepressants, antihistamines, or any other medicines that make you sleepy, tell your doctor how much and how often you take these medicines. Combinations of opioids, alcohol, and tranquilizers can be dangerous. Even small doses may cause problems.

Using such combinations can lead to overdose symptoms such as weakness, difficulty in breathing, confusion, anxiety, or more severe drowsiness or dizziness.

Side Effects of Opioids

Not everyone has side effects from opioids. Those that do occur are usually drowsiness, constipation, nausea, and vomiting. Some people might also experience dizziness, mental effects (nightmares, confusion, hallucinations), a moderate decrease in rate and depth of breathing, difficulty in urinating, or itching.

Drowsiness

At first, opioids cause drowsiness in some people, but this usually goes away after a few days. If your pain has kept you from sleeping, you may sleep more for a few days after beginning to take opioids while you “catch up” on your sleep. Drowsiness will also lessen as your body gets used to the medicine. Call your doctor or nurse if you feel too drowsy for your normal activities after you have been taking the medicine for a week.

Sometimes it may be unsafe for you to drive a car, or even to walk up and down stairs alone. Avoid operating heavy equipment or performing activities that require alertness.

Here are some ways to handle drowsiness:

- Wait a few days and see if it disappears.
- Check to see if other medicines you are taking can also cause drowsiness.
- Ask the doctor if you can take a smaller dose more frequently or an extended-release opioid.
- If the opioid is not relieving the pain, the pain itself may be wearing you out. In this case, better pain relief may result in less drowsiness. Ask your doctor what you can do to get better pain relief.
- Sometimes a small decrease in the dose of an opioid will still give you pain relief but no drowsiness. If drowsiness is

severe, you may be taking more opioid than you need. Ask your doctor about lowering the amount you are now taking.

- Ask your doctor about changing to a different medicine.
- Ask your doctor if you can take a mild stimulant such as caffeine.
- If drowsiness is severe or if it occurs suddenly after you have been taking opioids for a while, call your doctor or nurse right away.

Constipation

Opioids cause constipation to some degree in most people. Opioids cause the stool to move more slowly along the intestinal tract, thus allowing more time for water to be absorbed by the body. The stool then becomes hard. Constipation can often be prevented and/or controlled.

After checking with your doctor or nurse, you can try the following to prevent constipation:

- Ask your doctor to recommend a stool softener, and how often and how much you should take.
- Drink plenty of liquids. Eight to ten 8-ounce glasses of fluid each day will help keep your stools soft. This is the most important step!
- Eat foods high in fiber or roughage such as uncooked fruits (with the skin on), vegetables, and whole grain breads and cereals.
- Add 1 or 2 tablespoons of unprocessed bran to your food. This adds bulk and stimulates bowel movements.
- Keep a shaker of bran handy at mealtimes to make it easy to sprinkle on foods.
- Exercise as much as you are able.
- Eat foods that have helped relieve constipation in the past.
- If you are confined to bed, try to use the toilet or bedside commode when you have a bowel movement, even if that is the only time you get out of bed.

If you are still constipated after trying all the above measures, ask your doctor to prescribe a stool softener or laxative. Be sure to check with your doctor or nurse before taking any laxative or stool softener on your own. If you have not had a bowel movement for 2 days or more, call your doctor.

Nausea and Vomiting

Nausea and vomiting caused by opioids will usually disappear after a few days of taking the medicine. The following ideas may be helpful:

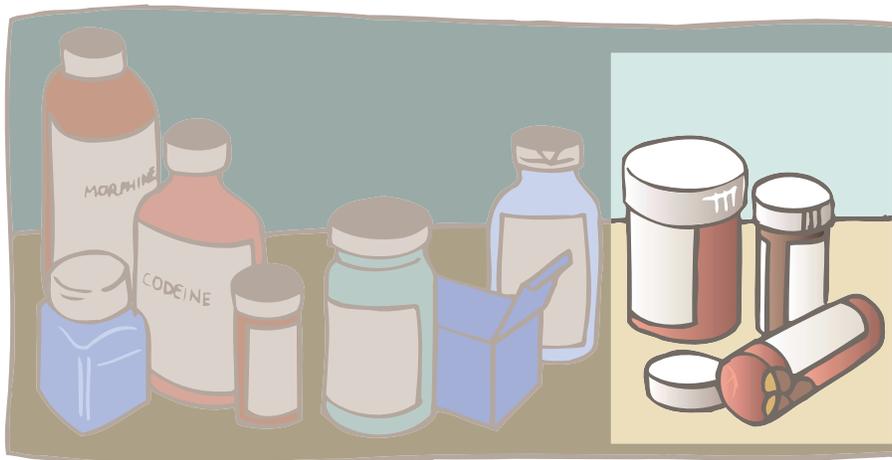
- If nausea occurs mainly when you are walking around (as opposed to being in bed), remain in bed for an hour or so after you take your medicine. This type of nausea is like motion sickness. Sometimes over-the-counter medicines such as meclizine or dimenhydrinate help this type of nausea. Check with your doctor or nurse before taking these medicines.
- If pain itself is the cause of the nausea, using opioids to relieve the pain usually makes the nausea go away.
- Medicines that relieve nausea can sometimes be prescribed.
- Ask your doctor or nurse if the cancer, some other medical condition, or other medicine you are taking such as steroids, anticancer drugs, or aspirin might be causing your nausea. Constipation may also contribute to nausea.

Some people think they are allergic to opioids if they cause nausea. Nausea and vomiting alone usually are not allergic responses. But a rash or itching along with nausea and vomiting may be an allergic reaction. If this occurs, stop taking the medicine and tell your doctor at once.

When You No Longer Need Opioids

You should not stop taking opioids suddenly. People who stop taking opioids are usually taken off the medicine gradually so that any withdrawal symptoms will be mild or scarcely noticeable. If you stop taking opioids suddenly and develop a flu-like illness, excessive perspiration, diarrhea, or any other unusual reaction, tell your doctor or nurse. These symptoms can be treated and tend to disappear in a few days to a few weeks.

Other Types of Pain Medicine

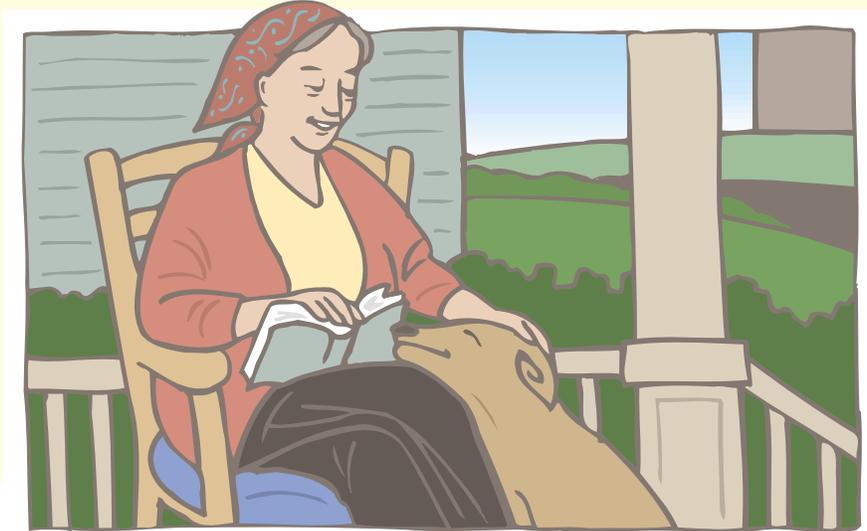


Several different classes of medicines can be used along with (or instead of) opioids to relieve cancer pain. They may relieve pain or may increase the effect of opioids. Others lessen the side effects of opioids. The following chart shows the classes of nonopioid medicines that might be prescribed by your doctor to help you get the best pain relief with as few side effects as possible.

Table 3. OTHER MEDICINES USED TO RELIEVE CANCER PAIN

DRUG CLASS	GENERIC NAME	ACTION	SIDE EFFECTS
Antidepressants	Amitriptyline, Nortriptyline, Desipramine	Used to treat tingling or burning pain from damaged nerves. Nerve injury can result from surgery, radiation therapy, or chemotherapy.	Dry mouth, sleepiness, constipation, drop in blood pressure with dizziness or fainting when standing. Blurred vision. Urinary retention. Patients with heart disease may have an irregular heartbeat.
Antihistamines	Hydroxyzine Diphenhydramine	Help control nausea and help people sleep. Help control itching.	Drowsiness.
Anti-anxiety drugs	Diazepam, Lorazepam	Used to treat muscle spasms that often go along with severe pain. Also lessen anxiety.	Drowsiness. May cause urinary incontinence.
Amphetamines	Caffeine, Dextroamphetamine, Methylphenidate	Increase the pain relieving action of opioids and educe the drowsiness they cause.	Irritability. Rapid heartbeat. Decreased appetite.
Anticonvulsants	Carbamazepine, Clonazepam, Gabapentin, Phenytoin	Help to control tingling or burning from nerve injury caused by the cancer or cancer therapy.	Liver problems and lowered number of red and white cells in the blood. Gabapentin may cause sedation and dizziness.
Steroids	Dexamethasone, Prednisone	Help relieve bone pain, pain caused by spinal cord and brain tumors, and pain caused by inflammation. Increase appetite.	Fluid buildup in the body. Increased blood sugar. Stomach irritation. Rarely, confusion, altered behavior, and sleeplessness.

Nondrug Treatments for Pain



Nondrug treatments are now widely used to help manage cancer pain. There are many techniques that are used alone or along with medicine. Some people find they can take a lower dose of medicine with such techniques. These methods include: relaxation, biofeedback, imagery, distraction, **hypnosis**, skin stimulation, transcutaneous electric nerve stimulation (TENS), **acupuncture**, exercise or physical therapy, and emotional support and counseling.

You may need the help of health professionals — social workers, physical therapists, psychologists, nurses, or others — to learn these techniques. Family and friends can also help. To find names and numbers of practitioners who specialize in and organizations knowledgeable about these techniques:

- Talk with your doctor or nurse.
- Contact a local **hospice**, cancer treatment center, or pain clinic.
- Visit your local bookstores or library.

- Contact the National Center for Complementary and Alternative Medicine Clearinghouse toll free at 1-888-644-6226 or via email at info@nccam.nih.gov.

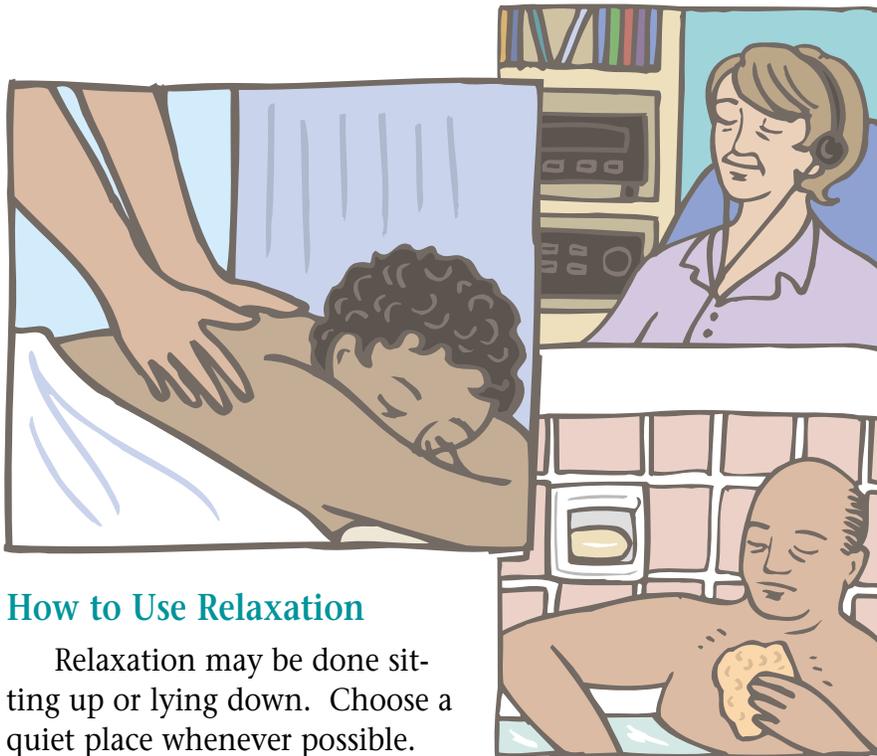
Because pain may be a sign that the cancer has spread, an infection is present, or there are problems caused by the cancer treatment, report any new pain problems to the doctor or nurse before trying to have the pain relieved by any of the following methods.

Some general guidelines for relieving pain with nondrug methods include:

- Learn which methods work for you. Try using a non-medicine method along with your medicine. For instance, you might use a relaxation technique (to lessen tension, reduce anxiety, and manage pain) at the same time you take medicine.
- Know yourself and what you can do. Often when people are rested and alert, they can use a method that demands more attention and energy. When tired, people may need to use a method that requires less effort. For example, try distraction when you are rested and alert; use hot or cold packs when you are tired.
- Be open-minded and keep trying. Keep a record of what makes you feel better and what doesn't help.
- Try each method more than once. If it doesn't work the first time, try it a few more times before you decide it is not helping you.

Relaxation

Relaxation relieves pain or keeps it from getting worse by reducing tension in the muscles. It can help you fall asleep, give you more energy, make you less tired, reduce your anxiety, and help other pain relief methods work better. Some people, for instance, find that taking pain medicine or using a cold or hot pack works faster and better when they relax at the same time.



How to Use Relaxation

Relaxation may be done sitting up or lying down. Choose a quiet place whenever possible.

Close your eyes. Do not cross your arms and legs because that may cut off circulation and cause numbness or tingling. If you are lying down, be sure you are comfortable. Put a small pillow under your neck and under your knees or use a low stool to support your lower legs.

There are many methods. Here are some for you to try:

Visual concentration and rhythmic massage:

- Open your eyes and stare at an object, or close your eyes and think of a peaceful, calm scene.
- With the palm of your hand, massage near the area of pain in a circular, firm manner. Avoid red, raw, or swollen areas. You may wish to ask a family member or friend to do this for you.

Inhale/tense, exhale/relax:

- Breathe in deeply. At the same time, tense your muscles or a group of muscles. For example, you can squeeze your eyes shut, frown, clench your teeth, make a fist, stiffen your arms and legs, or draw up your arms and legs as tightly as you can.
- Hold your breath and keep your muscles tense for a second or two.
- Let go! Breathe out and let your body go limp.

Slow rhythmic breathing:

- Stare at an object or close your eyes and concentrate on your breathing or on a peaceful scene.
- Take a slow, deep breath and, as you breathe in, tense your muscles (such as your arms).
- As you breathe out, relax your muscles and feel the tension draining.
- Now remain relaxed and begin breathing slowly and comfortably, concentrating on your breathing, taking about 9 to 12 breaths a minute. Do not breathe too deeply.
- To maintain a slow, even rhythm as you breathe out, you can say silently to yourself, "In, one, two; out, one, two." It may be helpful at first if someone counts out loud for you. If you ever feel out of breath, take a deep breath and then continue the slow breathing. Each time you breathe out, feel yourself relaxing and going limp. If some muscles, such as your shoulder muscles, are not relaxed, tense them as you breathe in and relax them as you breathe out. Do this only once or twice for each specific muscle group.
- Continue slow, rhythmic breathing for a few seconds up to 10 minutes, depending on your need.
- To end your slow rhythmic breathing, count silently and slowly from one to three. Open your eyes. Say silently to

yourself, “I feel alert and relaxed.” Begin moving about slowly.

Other methods you can add to slow rhythmic breathing:

- Imagery (see pages 36-37 for ideas).
- Listening to slow, familiar music through an earphone or headset.
- Progressive relaxation of body parts. Once you are breathing slowly and comfortably, you may relax different body parts, starting with your feet and working up to your head. Think of words such as limp, heavy, light, warm, or floating. Each time you breathe out, you can focus on a particular area of the body and feel it relaxing. Try to imagine that the tension is draining from that area. For example, as you breathe out, feel your feet and ankles relaxing; the next time you breathe out, feel your calves and knees relaxing, and so on up your body.
- Ask your doctor or nurse to recommend commercially available relaxation tapes. These tape recordings provide step-by-step instructions in relaxation techniques.

Precautions:

Some people who have used relaxation for pain relief have reported the following problems and have suggested the following solutions:

- Relaxation may be difficult to use with severe pain. If you have this problem, use quick and easy relaxation methods such as visual concentration with rhythmic massage or breathe in/tense, breathe out/relax.
- Sometimes breathing too deeply for a while can cause shortness of breath. If this happens to you, take shallow breaths and/or breathe more slowly.
- You may fall asleep. This can be especially helpful if you are ready to go to bed. If you do not wish to fall asleep, sit in a hard chair while doing the relaxation exercise or set a timer or alarm.

If you have trouble using these methods, ask your doctor, nurse, social worker, or pain specialist to refer you to someone who is experienced in relaxation techniques. Do not continue any technique that increases your pain, makes you feel uneasy, or causes unpleasant effects.

Biofeedback

Learning this technique requires the help of a licensed biofeedback technician. With the help of special machines, people can learn to control certain body functions such as heart rate, blood pressure, and muscle tension. Biofeedback is sometimes used to help people learn to relax. You can use biofeedback techniques to help you relax and to help you cope with pain. This technique is usually used with other pain relief methods.

Imagery

Imagery is using your imagination to create mental pictures or situations. The way imagery relieves pain is not completely understood. Imagery can be thought of as a deliberate daydream that uses all of your senses — sight, touch, hearing, smell, and taste. Some people believe that imagery is a form of self-hypnosis.

Certain images may reduce your pain both during imagery and for hours afterward. If you must stay in bed or can't leave the house, you may find that imagery helps reduce the closed-in feeling; you can imagine and revisit your favorite spots in your mind. Imagery can help you relax, relieve boredom, decrease anxiety, and help you sleep.

How to Use Imagery

Imagery usually works best with your eyes closed. You may want to use a relaxation technique before using imagery. The image can be something like a ball of healing energy or a picture drawn in your mind of yourself as a person without pain (for example, imagine that you are cutting the wires that send pain

signals from each part of your body to your brain). Or think of a pleasant, safe, relaxing place or activity that has made you happy. Exploring this place or activity in your mind in great detail can help you feel calm.

Here is an exercise with the ball of energy.

- Close your eyes. Breathe slowly and feel yourself relax.
- Concentrate on your breathing. Breathe slowly and comfortably from your abdomen. As you breathe in, say silently and slowly to yourself, “In, one, two.” As you breathe out, say, “Out, one, two.” Breathe in this slow rhythm for a few minutes.
- Imagine a ball of healing energy forming in your lungs or on your chest. It may be like a white light. It can be vague. It does not have to be vivid. Imagine this ball forming, taking shape.
- When you are ready, imagine that the air you breathe in blows this healing ball of energy to the area of your pain. Once there, the ball heals and relaxes you.
- When you breathe out, imagine the air blows the ball away from your body. As it goes, the ball takes your pain with it.
- Repeat the last two steps each time you breathe in and out.
- You may imagine that the ball gets bigger and bigger as it takes more and more discomfort away from your body.
- To end the imagery, count slowly to three, breathe in deeply, open your eyes, and say silently to yourself, “I feel alert and relaxed.” Begin by moving about slowly.

Problems that may occur with imagery are similar to the ones that occur with the relaxation techniques.

Distraction

Distraction means turning your attention to something other than the pain. People use this method without realizing it when they watch television or listen to the radio to “take their minds off” a worry or their pain.

Distraction may be used alone to manage mild pain or used with medicine to manage brief episodes of severe pain, such as pain related to procedures. Distraction is useful when you are waiting for pain medicine to start working. If the pain is mild, you may be able to distract yourself for hours. Distraction can be a powerful way of relieving even the most intense pain for awhile.

How to Use Distraction

Any activity that occupies your attention can be used for distraction. Distractions can be internal, for example, such as counting, singing mentally to yourself, praying, or repeating to yourself statements such as “I can cope.” Or distractions can be external, for example, doing crafts such as needlework, model building, or painting. Losing yourself in a good book might divert your mind from the pain. Going to a movie, watching television, or listening to music are also good distraction methods. Slow, rhythmic breathing can be used as distraction as well as relaxation. Visiting with friends or family is another useful distraction technique.

You may find it helpful to listen to rather fast music through a headset or earphones. To help keep your attention on the music, tap out the rhythm. You can adjust the volume to match the intensity of the pain, making it louder for very severe pain. This technique does not require much energy, so it may be very useful when you are tired.

After using a distraction technique, some people report that they are tired, irritable, and feel more pain. If this is a problem for you, you may not wish to use distraction or to be careful about which distraction methods you use and when you use them.

Hypnosis

Hypnosis is a trance-like state of high concentration between sleeping and waking. In this relaxed state, a person becomes more receptive or open to suggestion. Hypnosis can be used to block the awareness of pain, to substitute another feeling for the pain, and to change the sensation to one that is not painful. This can be brought on by a person trained in hypnosis, often a psychologist or psychiatrist. You can also be trained to hypnotize yourself.

During hypnosis, many people feel similar to the state we experience when we begin to awaken in the morning. We can't quite open our eyes, but are very aware. We can hear sounds inside or outside our house. Our eyes remain closed, and we feel as though we either can't or don't want to wake up and open our eyes.

People can easily be taught, by a hypnotherapist, to place themselves in a hypnotic state, make positive suggestions to themselves, and to leave the hypnotic state.

Choose a hypnotherapist who is licensed in the healing arts or who works under the supervision of someone who is licensed. To locate a therapist skilled in hypnosis, contact the behavioral medicine department at a cancer center near you.

Skin Stimulation

In this series of techniques, the skin is stimulated so that pressure, warmth, or cold is felt, but the feeling of pain is lessened or blocked. Massage, pressure, vibration, heat, cold, and menthol preparations are used to stimulate the skin. These techniques also change the flow of blood to the area that is stimulated. Sometimes skin stimulation will get rid of pain or lessen pain during the stimulation and for hours after it is finished.

Skin stimulation is done either on or near the area of pain. You can also use skin stimulation on the side of the body opposite the pain. For example, you might stimulate the left knee to decrease the pain in the right knee. Stimulating the skin in areas away from the pain can be used to increase relaxation and may relieve pain.

Precautions:

- If you are having radiation therapy, check with your doctor or nurse before using skin stimulation.
- If you are receiving chemotherapy, check with your doctor before using hot or cold packs.
- You should not apply ointments, salves, or liniments to the treatment area, and you should not use heat or extreme cold on treated areas.

Massage

Using a slow, steady, circular motion, massage over or near the area of pain with just your bare hand or with any substance that feels good, such as talcum powder, warm oil, or hand lotion. Depending upon where your pain is located, you may do it yourself or ask a family member, friend, or a massage therapist to give you a massage. Some people find brushing or stroking lightly more comforting than deep massage. Use whatever works best for you.

Precaution:

- If you are having radiation therapy, avoid massage in the treatment area as well as over red, raw, tender, or swollen areas.

Pressure

To use pressure, press on various areas over and near your pain with your entire hand, the heel of your hand, your fingertip or knuckle, the ball of your thumb, or by using one or both hands to encircle your arm or leg. You can experiment by applying pressure for about 10 seconds to see if it helps. You can also feel around your pain and outward to see if you can find “trigger points,” small areas under the skin that are especially sensitive or that trigger pain. Pressure usually works best if it is applied as firmly as possible without causing more pain. You can use pressure for up to 1 minute. This often will relieve pain for several minutes to several hours after the pressure is released.

Vibration

Vibration over and near the area of the pain may bring temporary relief. For example, the scalp attachment of a hand-held vibrator often relieves a headache. For low back pain, a long, slender battery-operated vibrator placed at the small of the back may be helpful. You may use a vibrating device such as a small battery-operated vibrator, a hand-held electric vibrator, a large heat-massage electric pad, or a bed vibrator. Do not use a vibrator on the stomach. Avoid vibration over red, raw, tender, or swollen areas.

Precaution:

- If you are having radiation therapy, avoid vibration in the treatment area.

Cold or Heat

As with any of the techniques described, you should use what works best for you. Heat often relieves sore muscles; cold lessens pain sensations by numbing the painful area. Many people with prolonged pain use only heat and have never tried cold. Some people find that cold relieves pain faster, and relief may last longer. Also, you can alternate heat and cold for added relief in some cases.

For *cold*, try gel packs that are sealed in plastic and remain soft and flexible even at freezing temperatures. Gel packs are available at drugstores and medical supply stores. They can be used again and stored in the freezer. You may want to wrap the pack in a towel to make it more comfortable. An ice pack, ice cubes wrapped in a towel, or water frozen in a paper cup also work.

Precaution:

- If you start to shiver when using cold, stop right away. Do not use cold so intense or for so long that the cold itself causes more pain.

To use *heat* for pain relief, a heating pad that generates its own moisture is convenient. You can also try gel packs heated in hot water, hot water bottles, a hot, moist towel, a regular heating pad,

a hot bath or shower, or a hot tub to apply heat. For aching joints, such as elbows and knees, wrap the joint in a lightweight plastic wrap (tape the plastic to itself). This retains body heat and moisture.

Precautions:

- Do not use a heating pad on bare skin. Do not go to sleep for the night with the heating pad turned on. Also, be very careful, if you are taking medicines that make you sleepy or if you do not have much feeling in the area.
- Do not use heat over a new injury because heat can increase bleeding — wait at least 24 hours.
- Avoid heat or cold over any treatment area receiving radiation therapy and for 6 months after therapy has ended.
- If you are receiving chemotherapy, check with your doctor before using a cold pack.
- Do not use heat or cold over any area where your circulation or sensation is poor.
- Do not use heat or cold application for more than 5 to 10 minutes.

Menthol

Many menthol preparations are available for pain relief. There are creams, lotions, liniments, or gels that contain menthol. When they are rubbed into the skin, they increase blood circulation to the affected area and produce a warm (sometimes cool) soothing feeling that lasts for several hours.

How to Use Menthol

To use menthol preparations, test your skin by rubbing a small amount of the substance in a circle about the size of a quarter in the area of the pain (or the area to be stimulated). This will let you know whether menthol is uncomfortable to you or irritates your skin. If the menthol does not create a problem, rub some

more into the area. The feeling from the menthol gradually increases and remains up to several hours. To increase the strength and length of the feeling, you can open your skin pores with heat (e.g., shower, sun) or wrap a plastic sheet over the area after the menthol application. (Don't use a heating pad because it may cause a burn). If you are concerned about the odor, you can use the menthol when you are alone, or perhaps in the evening or through the night.

Precautions:

- Do not rub menthol near your eyes, over broken skin, a skin rash, or mucous membranes (such as inside your mouth, or around your genitals and rectum).
- Make sure you do not get menthol in your eyes (wash your hands after applying menthol).
- Do not use menthol in the treatment area during radiation therapy.
- If you have been told not to take aspirin, do not use these preparations until you check with your doctor. Many menthol preparations contain an additional ingredient similar to aspirin. A small amount of this aspirin-like substance may be absorbed through the skin.

Transcutaneous Electric Nerve Stimulation (TENS)

This is a technique in which mild electric currents are applied to some areas of the skin by a small power pack connected to two electrodes. The feeling is described as a buzzing, tingling, or tapping feeling. The small electric impulses seem to interfere with pain sensations. The current can be adjusted so that the sensation is pleasant and relieves pain. Pain relief lasts beyond the time that the current is applied. Your doctor or a physical therapist can tell you where to get a TENS unit, and how to use it properly.

Acupuncture

In acupuncture, thin needles are inserted into the body at certain points and at various depths and angles. Each point controls the pain sensation of a different part of the body. When the needle is inserted, a slight ache, dull pain, tingling, or electrical sensation is felt for a few seconds. Once the needles are in place, no further discomfort should be experienced. The needles are usually left in place for between 15 and 30 minutes, depending on the condition treated. No discomfort is felt when the needles are removed. Acupuncture is now a widely accepted and proven method of pain relief. Acupuncture should be performed by a licensed acupuncturist. Ask your doctor, nurse, or social worker where to get acupuncture.

Precautions:

- Make sure your acupuncturist uses sterile needles.
- If you are receiving chemotherapy, talk to your doctor before beginning acupuncture.

Emotional Support and Counseling

If you feel anxious or depressed, your pain may seem worse. Also, pain can cause you to feel worried, depressed, or easily discouraged. Some people feel hopeless or helpless. Others may feel embarrassed, inadequate, or angry, frightened, isolated, or frantic. These are normal feelings that can be relieved.

Finding Support

Try to talk about your feelings with someone you feel comfortable with — doctors, nurses, social workers, family or friends, a member of the clergy, or other people with cancer. You may also wish to talk to a counselor or a mental health professional. Your doctor, nurse or the social services department at your local hospital can help you find a counselor who is specially trained to help people with chronic illnesses.



You may also want to join a support group where people with cancer meet and share their feelings about how they have coped with cancer. For information about support groups, ask your doctor, nurse, or hospital social worker. Also, many newspapers carry a special health supplement containing information about where to find support groups.

Other Pain Relief Methods



Some people have pain that is not relieved by medicine or nondrug techniques. In these cases, other treatments can be used to reduce pain.

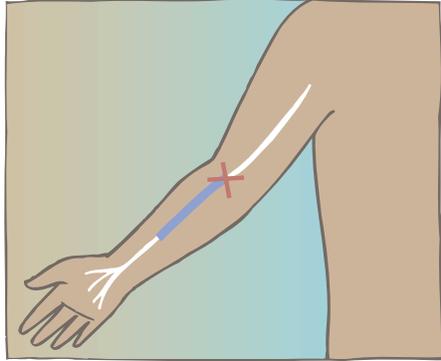
Radiation Therapy

Treatment with high-energy rays (called radiation therapy) can reduce pain by shrinking a tumor. Often, only a single dose of radiation is needed to relieve pain.

Surgery

Pain cannot be felt if the nerve pathways that relay pain impulses to the brain are interrupted. To block these pathways, a neurosurgeon may cut nerves, which are usually near the spinal cord. When the nerves that relay pain are destroyed, the sensations of pressure and temperature can no longer be felt. Surgeons with special skills and expertise in pain management, preferably in consultation with other pain specialists, should perform the procedures.

Nerve Blocks



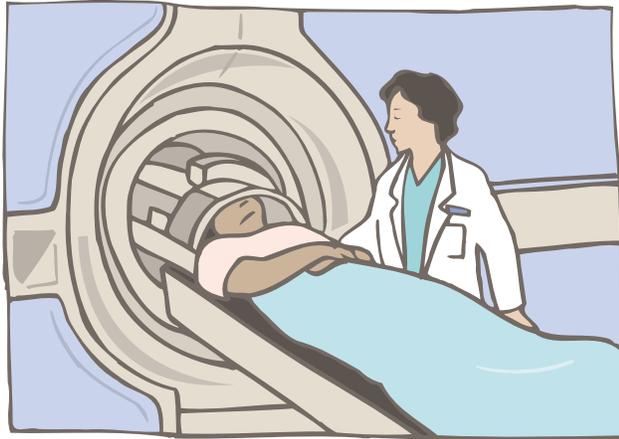
A nerve block is a procedure where a **local anesthetic**, which may be combined with a steroid, is injected into or around a nerve or into the spine to block pain. After the injection, the nerve is no longer able to relay pain so the pain is temporarily relieved. For longer lasting

pain relief, phenol or alcohol can be injected. A nerve block may cause muscle paralysis or a loss of all feeling in the affected area.

End of Life Care

The goal of pain control is usually for a person to be as free from pain as possible and still be able to continue with normal life activities, such as work, hobbies and recreation. However, if a person has only a short time to live — less than 12 months — and has pain that is hard to control, comfort becomes the most important goal. Pain control methods that can cause lasting side effects may need to be used to make a patient comfortable. For example, a nerve block may cause a muscle to become paralyzed. Also, a certain medicine or higher dose of a medicine that may cause side effects, such as sleeping or resting more than usual, may need to be used to control pain or relieve restlessness.

Research on Pain Control Methods



Patient studies — clinical studies or clinical trials — have contributed largely to the decrease in cancer death rates in the United States. Clinical studies have also led to better pain control methods, such as continuous pain-medication **infusion** pumps (patient-controlled analgesia), first developed in the early 1980s.

In cancer research, a clinical trial is designed to show how a given anticancer strategy — for instance, a promising drug, a new diagnostic test, or a possible way to prevent cancer — affects the people who receive it. “Clinical trial” is a research term that refers to medical studies with people. These studies are the final step in the process of developing new drugs and other means to fight diseases. Once a drug has shown promise, first in the laboratory and then in animal studies, it may move onto studies with people if the U.S. Food and Drug Administration (FDA) approves. Only after a drug proves safe and effective for patients in clinical studies does the FDA grant approval for using the drug as standard treatment.

For more information about current research on pain control methods, contact NCI’s Cancer Information Service (CIS) at 1-800-4-CANCER (1-800-422-6237).

Resources

Information about cancer is available from many sources, including the ones listed here. You may wish to check for more information from support groups in your community.

National Cancer Institute

Telephone...

Cancer Information Service (CIS)

Provides accurate, up-to-date information on cancer to patients and their families, health professionals, and the general public. Information specialists translate the latest scientific information into understandable language and respond in English, Spanish, or on TTY equipment.

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY: 1-800-332-8615

Internet...

These web sites may be useful:

<http://cancer.gov>

NCI's primary web site; contains information about the Institute and its programs, cancer information and clinical trials.

Fax...

CancerFax®

Includes NCI information about cancer treatment, screening, prevention, and supportive care. To obtain a contents list, dial 301-402-5874 from a fax machine hand set and follow the recorded instructions.

National Center for Complementary and Alternative Medicine

The National Center for Complementary and Alternative Medicine (NCCAM), part of the National Institutes of Health (NIH), facilitates research and evaluation of unconventional medical practices and distributes this information to the public. Information on alternative medicine and NCCAM publications is available through:

- NCCAM's Web site at <http://nccam.nih.gov>.
- NCCAM Clearinghouse
Toll Free: 1-888-644-6226
TTY/TDY: 1-888-644-6226
- NCCAM's email — info@nccam.nih.gov

Agency for Health Care Research and Quality

The Agency for Health Care Research and Quality (AHRQ), a part of the Public Health Service in the U.S. Department of Health and Human Services (DHHS), is the lead agency charged with supporting research designed to improve the quality of health care, reduce its cost, and broaden access to essential services. One of AHRQ's highest priorities is providing consumers with science-based, easily understandable information that will help them make informed decisions about their own personal health care, including selection of the highest quality health plans and most appropriate health care services.

- Web site: <http://www.ahrq.gov>
- AHRQ Publications Clearinghouse
P.O. Box 8547
Silver Spring, MD 20907
Telephone toll-free within the U.S: 800-358-9295
Telephone outside the U.S.: (410) 381-3150
TDD toll-free telephone: 888-586-6340
- AHRQ InstantFAX. Call (301) 594-2800 for instructions.

American Cancer Society

The American Cancer Society (ACS) is a voluntary national organization with local offices around the country. The ACS supports research, provides information about cancer, and offers many programs and services to patients and their families.

- Visit the ACS web site at <http://www.cancer.org>
- For detailed information about specific types of cancer, services, and activities in local areas, call the Society's toll-free number 1-800-ACS-2345 (1-800-227-2345).

Appendix

Patient Notes

Doctor's Name: _____

Address: _____

Phone: _____

Nurse's Name: _____

Address: _____

Phone: _____

Pharmacist's Name: _____

Address: _____

Phone: _____

Social Worker/Therapist: _____

Address: _____

Phone: _____

Questions To Ask:

Pain Control Record

You can use a chart like this to rate your pain and to keep a record of how well the medicine is working. Write the information in the chart. Use the pain intensity scale to rate your pain before and after you take the medicine.

Pain Intensity Scale

0 1 2 3 4 5 6 7 8 9 10

No pain

Worst pain
imaginable

Date	Time	Pain scale rating	Medicine and dose	Other pain relief methods	Side effects from pain medicine
June 6 (Example)	8am	6	Morphine 30mg — every 4 hrs	massage	constipation

Glossary

Acupuncture: fine needles are inserted into the skin at certain points of the body to relieve pain.

Acute pain: pain that is severe, but lasts a relatively short time.

Addiction: uncontrollable drug craving, seeking, and use.

Analgesics: medicines that are used to relieve pain.

Anesthesiologist: a doctor who specializes in giving medicines or other agents that prevent or relieve pain.

Anticonvulsants: antiseizure medicine, also used to control burning and tingling pain.

Antidepressant: a medicine used to treat depression or tingling or burning pain from damaged nerves.

Anxiolytic (or anti-anxiety medication): a medicine used to treat anxiety or muscle spasms.

Biofeedback: a method of learning to control certain body functions such as heartbeat, blood pressure, and muscle tension with the help of a special machine. This method can help control pain.

Breakthrough pain: occurs when moderate to severe pain “breaks through” or is felt for a short time.

Chemotherapy: treatment with anticancer drugs.

Chronic pain: pain that can range from mild to severe, and is present for a long time.

Distraction: a pain relief method that takes the attention away from the pain.

Dose: the amount of medicine taken.

Epidural: an injection into the spinal column, but outside of the spinal cord.

Generic: official (compendial) names by which medicines are known.

Hospice: a program that provides specialized care for people who are near the end of life and their families, either at home, in free-standing facilities, or within hospitals.

Hypnosis: a person enters into a trance-like state, becomes more aware and focused, and is more open to suggestion.

Imagery: people think of pleasant images or scenes, such as waves hitting the beach, to help them relax.

Infusion: a method of giving pain medication into a vein; unlike an injection, which is pushed in by a syringe, an infusion flows in by gravity or a mechanical pump.

Intramuscular (IM): into a muscle.

Intrathecal (IC): into fluid around the spinal cord.

Intravenous (IV): into a vein.

Local anesthetic: a medicine that blocks the feeling of pain in a specific location in the body.

Narcotic: see opioids.

Nerve block: pain medicine is injected directly into or around a nerve or into the spine to block pain.

Neurologist: a doctor who specializes in treating conditions associated with the brain, nerves, and spinal cord.

Neurosurgeon: a doctor who specializes in operations on the brain, nerves, and spinal cord.

Nonopioids: acetaminophen and nonsteroidal anti-inflammatory drugs (NSAIDs), such as aspirin and ibuprofen.

Nonprescription: (over-the-counter) pain relievers (analgesics) that can be bought without a doctor's order.

NSAIDs (Nonsteroidal anti-inflammatory drugs): medicines that control mild to moderate pain and inflammation. Can be used either alone or in combination with other medicines.

Oncologist: a doctor who specializes in the treatment of cancer.

Onset of action: the length of time it takes for a medicine to start to work.

Opioids: also known as narcotics. The strongest pain relievers available. A prescription is needed for these medicines.

Pain threshold: the point at which a person becomes aware of pain.

Patient-controlled analgesia (PCA): a method in which a person with pain controls the amount of pain medicine that is taken. When pain relief is needed, the person can receive a preset dose of pain medicine by pressing a button on a computerized pump that is connected to a small tube in the body.

Phantom limb pain: when pain or other unpleasant feelings are felt in a missing (phantom) limb.

Physical therapy: a treatment for pain in muscles, nerves, joints, and bones with exercise, electrical stimulation, hydrotherapy, and the use of massage, heat, cold, and electrical devices.

Prescription: a doctor's order.

Radiation therapy: treatment with high-energy radiation to kill or control cancer cells.

Rapid-onset opioids: an opioid that relieves pain quickly.

Relaxation techniques: methods used to lessen tension, reduce anxiety, and manage pain.

Side effect: problems caused by a medicine or procedure, such as constipation or drowsiness.

Skin patch: a bandage-like patch that releases medicine through the skin and then into the bloodstream. The medicine enters the blood slowly and steadily.

Skin stimulation: to stimulate the skin through pressure, friction, temperature change, or chemical substances. With such stimulation, the feeling of pain can be lessened or blocked.

Stage: the extent of disease.

Steroids: medicines that lessen swelling.

Subcutaneous injection: under the skin.

Tolerance: occurs when the body gets used to the medicine so that either more medicine is needed to control pain or different medicine is needed.

Transcutaneous Electric Nerve Stimulation (TENS): a technique in which mild electric currents are applied to some areas of the skin by a small power pack connected to two electrodes.

The National Cancer Act, passed by Congress in 1971, made cancer research a national priority. Since that time, the National Cancer Institute (NCI), the lead Federal agency for cancer research, has collaborated with top researchers and facilities across the country to conduct innovative research leading to progress in cancer prevention, detection, diagnosis, and treatment. These efforts have resulted in a decrease in the overall cancer death rate, and have helped improve and extend the lives of millions of Americans.

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